

**REMARKS**

Favorable reconsideration of the application is respectfully requested in light of the amendments and remarks herein.

Upon entry of this amendment, claims 1, 3, 5–9, 11, 12, 19–21, 23–29 and 34–50 will be pending. By this amendment, claims 2, 4, 10, and 22 have been canceled; and claims 1, 5–7, 9, 19, and 27 have been amended. No new matter has been added.

§103 Rejection of Claims 1–3, 9, 19–21, 27, 34–42, and 45–47

In Section 5 of the March 26, 2007 Office Action (“the Office Action”), claims 1–3, 9, 19–21, 27, 34–42, and 45–47 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Barone (U.S. Patent Application No. 2005/0005303) in view of Kalluri (U.S. Patent No. 5,937,331).

In the Background Section of the Specification, it was stated that “[w]hile the use of triggers to download interactive content from remote sites, or provide interactive content themselves, is known in the art, any control over such interactivity has been limited to discrete periods of time such as program times or commercial breaks, but not both.” *Specification, page 4, lines 18–21*. That is, triggers for interactive program content generally occur in program segments of a broadcast stream, while triggers for interactive commercial content generally occur in segments of a broadcast stream devoted to a corresponding commercial spot. “Thus, efficiencies that could result from controlling and sharing the given time space, to the extent possible, could not be achieved. A need therefore exists to manage both interactive program content and interactive commercial content, and schedule and integrate interactive content from multiple sources that may or may not be known in advance, without interference.” *Specification,*

*page 4, lines 21–26 (emphasis added).*

Addressing the above-stated problem, independent claim 1 recites an interactive enabling system for managing interactive program content associated with enhanced program content and interactive commercial content associated with commercial spots as follows:

An interactive enabling system for managing interactive program content associated with enhanced program content and interactive commercial content associated with commercial spots, the system comprising:

*an interactive enabling device* coupled for receiving a broadcast stream, said broadcast stream including the enhanced program content in series with the commercial spots, the broadcast stream further including program pre-triggers, interactive program triggers, commercial pre-triggers, and interactive commercial triggers for retrieving the interactive program content and interactive commercial content; and

*at least one interactive content server* coupled for communicating with an interactive control application in the interactive enabling device;

wherein the interactive enabling device executes the interactive control application to manage the retrieval of the interactive program and commercial content from the at least one interactive content server in response to the program and commercial pre-triggers and make available the interactive program and commercial content in response to the interactive program and commercial triggers,

wherein the interactive enabling device is operable to respond to a commercial pre-trigger embedded in the enhanced program content and a program pre-trigger embedded in a commercial spot,

wherein the interactive control application includes a gatekeeper function for selectively retrieving interactive program and commercial content in response to recognized interactive program and commercial triggers, and

wherein the interactive enabling device is configured for receiving and responding to the program pre-triggers, the interactive program triggers, the commercial pre-triggers, and

the interactive commercial triggers embedded in the broadcast stream to ensure that the interactive program and commercial content do not overlap and interfere with each other.

(emphasis added)

Therefore, an interactive enabling system including the above features has at least the advantage that an interactive enabling device receives a broadcast stream, where the broadcast stream includes enhanced program content in series with the commercial spots and the broadcast stream also includes program pre-triggers, interactive program triggers, commercial pre-triggers, and interactive commercial triggers for retrieving the interactive program and commercial content. Further, the interactive enabling device is configured for receiving and responding to the program pre-triggers, the interactive program triggers, the commercial pre-triggers, and the interactive commercial triggers embedded in the broadcast stream to ensure that the interactive program and commercial content do not overlap and interfere with each other. Thus, an interactive enabling system including the above allows for managing both interactive program content and interactive commercial content when a broadcast stream includes enhanced program content in series with commercial spots. See *Specification, page 5, lines 2–4; Figures 3 and 4*. Moreover, the interactive enabling system allows interactive program and commercial content to be pre-cached in advance of the time it is needed, so that it will be available at that time. See *Specification, page 5, lines 14–16*.

By contrast, Barone discloses extracting a call from a TV signal (see *Barone, Fig. 5, 42*), displaying content at an “appropriate time” (see *id. at Fig. 5, 54*), and ITV content loading with respect to a commercial (see *id. at Figs. 2a, 2b, 4 and 7*). However, Barone fails to teach or suggest a broadcast stream including enhanced program content in series with the commercial spots, program pre-triggers, interactive program triggers, commercial pre-triggers, and

interactive commercial triggers for retrieving the interactive program and commercial content, nor an interactive enabling device executing an interactive control application to manage the retrieval of the interactive program and commercial content from an interactive content server in response to the program and commercial pre-triggers, where the interactive enabling device is configured for receiving and responding to the program pre-triggers, the interactive program triggers, the commercial pre-triggers, and the interactive commercial triggers embedded in the broadcast stream to ensure that the interactive program and commercial content do not overlap and interfere with each other.

In the Office Action, it is stated that Kalluri discloses a broadcast stream. See *Office Action*, page 4, line 9. However, even assuming that Kalluri discloses a broadcast stream, Kalluri fails to teach or suggest a broadcast stream including enhanced program content in series with the commercial spots, program pre-triggers, interactive program triggers, commercial pre-triggers, and interactive commercial triggers for retrieving the interactive program and commercial content, nor an interactive enabling device executing an interactive control application to manage the retrieval of the interactive program and commercial content from an interactive content server in response to the program and commercial pre-triggers, where the interactive enabling device is configured for receiving and responding to the program pre-triggers, the interactive program triggers, the commercial pre-triggers, and the interactive commercial triggers embedded in the broadcast stream to ensure that the interactive program and commercial content do not overlap and interfere with each other.

Further, claim 1 as amended includes the limitations of claim 4. Specifically, amended claim 1 also adds following limitations: “wherein the interactive enabling device is configured for receiving and responding to the program pre-triggers, the interactive program triggers, the

commercial pre-triggers, and the interactive commercial triggers embedded in the broadcast stream to ensure that the interactive program and commercial content do not overlap and interfere with each other.”

The Office Action uses Barone, Kalluri, Andrade, and Park to reject claim 4. Specifically, the Office Action cites column 4, lines 31-37 of Park (“In one embodiment, an icon for an enhancement afforded by the trigger appears on the screen of the receiver unit. If the viewer selects the icon using the remote control unit of the receiver unit, then the enhancement will be displayed. If the viewer does not select the icon within a certain amount of time, then the icon disappears and the enhancement is not displayed.”) to reject claim 4. Although it appears Park discloses displaying the enhancement depending on whether the viewer selects or not selects the icon using the remote control unit, Park clearly fails to teach or disclose that “the interactive enabling device is configured for receiving and responding to the program pre-triggers, the interactive program triggers, the commercial pre-triggers, and the interactive commercial triggers embedded in the broadcast stream to ensure that the interactive program and commercial content do not overlap and interfere with each other.”

Therefore, Barone, Kalluri, Andrade, and Park, individually or in combination, fail to teach or suggest all of the limitations of amended claim 1.

Based on the foregoing discussion regarding amended claim 1, claim 1 should be allowable over Barone and Kalluri. Independent claim 19 includes the above-discussed relevant limitations for claim 1 in substantially similar forms. Therefore claim 19 should also be allowable over Barone and Kalluri. Since claims 3, 20–21, 34–38 and 45–47 depend from one of independent claims 1 and 19, claims 3, 20–21, 34–38 and 45–47 should also be allowable over Barone and Kalluri. Claim 2 has been canceled.

Regarding claim 9, it has been amended to recite following:

An interactive enabling system for managing interactive program content associated with enhanced program content and interactive commercial content associated with commercial spots, the system comprising:

*an interactive enabling device* coupled for receiving a broadcast stream generated by a broadcast sponsor and for responding to program pre-triggers and commercial pre-triggers inserted into the broadcast stream for retrieving the interactive program and commercial content in advance of when the content is needed, said broadcast stream including the enhanced program content and the commercial spots; and

*at least one interactive content server* coupled through a communication link for communicating with an interactive control application in the interactive enabling device;

wherein the interactive enabling device executes the interactive control application to manage the retrieval of the interactive program and commercial content in response to the program pre-triggers and commercial pre-triggers;

wherein the interactive enabling device is operable to respond to a commercial pre-trigger embedded in the enhanced program content and a program pre-trigger embedded in a commercial spot; and

wherein the interactive enabling device is configured for receiving interactive program pre-triggers and commercial pre-triggers that were inserted into the broadcast stream by the broadcast sponsor at a specific time in advance of when the interactive program and commercial content is needed, based on estimates for communication link speed.

(emphasis added)

Thus, claim 9 has been amended to include the limitations of claim 10. Specifically, amended claim 9 also adds following limitations: “wherein the interactive enabling device is configured for receiving interactive program pre-triggers and commercial pre-triggers that were

inserted into the broadcast stream by the broadcast sponsor at a specific time in advance of when the interactive program and commercial content is needed, based on estimates for communication link speed.”

The Office Action uses Barone, Kalluri, Andrade, and Markel to reject claim 10. Specifically, the Office Action cites column 6, lines 36-47 of Markel (“In yet another embodiment, The HTML/Javascript page may be configured to monitor time information from a media player and to compare the time information with a list of trigger times contained in the HTML/Javascript page file, and to access and render enhancements when a listed trigger time occurs. Embodiments that employ a locator to access enhancement information may also comprise pre-fetching of enhancement information to accommodate access latencies. One pre-fetch embodiment may employ a ‘pre-trigger’ that results in the enhancement information for an upcoming trigger to be accessed.”) to reject claim 10. Although Markel seems to disclose pre-fetching of enhancement information to accommodate access latencies, Markel clearly fails to teach or disclose that “the interactive enabling device is configured for receiving interactive program pre-triggers and commercial pre-triggers that were inserted into the broadcast stream by the broadcast sponsor at a specific time in advance of when the interactive program and commercial content is needed, based on estimates for communication link speed.”

Based on the foregoing discussion regarding amended claim 9, claim 9 should be allowable over Barone and Kalluri. Independent claim 27 includes the above-discussed relevant limitations for claim 9 in substantially similar forms. Therefore claim 27 should also be allowable over Barone and Kalluri. Since claims 39-42 depend from claim 9, claims 39-42 should also be allowable over Barone and Kalluri.

Accordingly, it is submitted that the rejection of claims 1-3, 9, 19-21, 27, 34-42 and 45-

47 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claims 2, 3, 20 and 21

In Section 6 of the Office Action, claims 2, 3, 20 and 21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Barone in view of Kalluri as applied to claims 1 and 19 and in further view of Andrade (U.S. Patent Application No. 2002/0059644).

Based on the foregoing discussion regarding claims 1 and 19, and since claims 3, 20 and 21 depend from one of claims 1 and 19, claims 3, 20 and 21 should be allowable over Barone and Kalluri. Andrade is merely cited for disclosing “that the interactive control application includes a gatekeeper function.” However, even assuming that Andrade discloses a gatekeeper function as stated, Andrade fails to disclose the relevant limitations discussed above. Thus, the combination of Barone, Kalluri and Andrade still lacks the above-discussed relevant limitations. Therefore, claims 3, 20 and 21 should also be allowable over Barone, Kalluri and Andrade. Claim 2 has been canceled.

Accordingly, it is submitted that the rejection of claims 2, 3, 20 and 21 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claims 4 and 22

In Section 7 of the Office Action, claims 4 and 22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Barone and Kalluri in view of Andrade as applied to claims 1 and 19 and further in view of Park (U.S. Patent No. 6,460,180).

Claims 4 and 22 have been canceled.

Accordingly, it is submitted that the rejection of claims 4 and 22 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claims 5–7 and 23–25

In Section 8 of the Office Action, claims 5–7 and 23–25 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Barone and Kalluri in view of Andrade as applied to claims 1 and 19 and further in view of Zigmond *et al.* (U.S. Patent No. 6,698,020; hereinafter referred to as “Zigmond1”).

Based on the foregoing discussion regarding claims 1 and 19, and since claims 5–7 and 23–25 depend from one of claims 1 and 19, claims 5–7 and 23–25 should be allowable over Barone, Kalluri, and Andrade.

Further, Zigmond1 is merely cited for disclosing “that the gatekeeper is configured to recognize the interactive program and commercial triggers based on agreements.” Therefore, the combination of Barone, Kalluri, Andrade and Zigmond still lacks the above-discussed relevant limitations.

Accordingly, it is submitted that the rejection of claims 5–7 and 23–25 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claims 10, 11 and 28

In Section 9 of the Office Action, claims 10, 11 and 28 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Barone and Kalluri in view of Andrade as applied to claims 9 and 27 and further in view of Markel (U.S. Patent No. 6,791,579).

Based on the foregoing discussion regarding claims 9 and 27, and since claims 11 and 28 depend from one of claims 9 and 27, claims 11 and 28 should be allowable over Barone, Kalluri, Andrade, and Markel. Claim 10 has been canceled.

Accordingly, it is submitted that the rejection of claims 10, 11, and 28 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claims 8, 12, 26, 29, 43, 44 and 48–50

In Section 10 of the Office Action, claims 8, 12, 26, 29, 43, 44 and 48–50 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Barone and Kalluri in view of Andrade and further in view of Zigmond (U.S. Patent No. 6,330,719; hereinafter referred to as “Zigmond2”).

Based on the foregoing discussion regarding claims 1, 9, 19 and 27, and since claims 8, 12, 26, 29, 43, 44 and 48–50 depend from one of claims 1, 9, 19 and 27, claims 8, 12, 26, 29, 43, 44 and 48–50 should be allowable over Barone, Kalluri, and Andrade. Further, Zigmond2 is merely cited for disclosing a “randomizer.” Therefore, the combination of Barone, Kalluri, Andrade and Zigmond2 still lacks the above-discussed relevant limitations. Therefore, claims 8, 12, 26, 29, 43, 44, and 48–50 should also be allowable over Barone, Kalluri, Andrade and Zigmond2.

Accordingly, it is submitted that the rejection of claims 8, 12, 26, 29, 43, 44, and 48–50 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.


**Conclusion**

In view of the foregoing, applicants respectfully request reconsideration of claims 1, 3, 5–9, 11, 12, 19–21, 23–29 and 34–50 in view of the remarks and submit that all pending claims are presently in condition for allowance.

In the event that additional cooperation in this case may be helpful to complete its prosecution, the Examiner is cordially invited to contact Applicant's representative at the telephone number written below.

Respectfully submitted,  
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